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EXAMINER

ROBERTS, BRIAN S

ART UNIT

PAPER NUMBER

2662

DATE MAILED: 01/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

- Claims 1-8 and 16-19 have been examined.

Election/Restrictions

1. Applicant's election with traverse of Group 1 claims 1-8 and 16-19 in the reply filed on 11/23/2005 is acknowledged. The traversal is on the ground(s) that search and examination of the entire application could be made without serious burden. This is not found persuasive because there would be a serious burden on the examiner as demonstrated by the inventions having acquired a separate status in the art as shown by the different classification of Groups 1 and 2.

The requirement is still deemed proper and is therefore made FINAL.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2662

- In reference to claim 6

In line 4 of claim 6, the limitation "first-generated audio data" renders the claim indefinite. Neither claim 6 nor parent claim 1 discloses an element to generate audio data or the step of generating audio data. Therefore, it is unclear how there is a "first-generated audio data".

- In reference to claims 8, 17, 19

Claims 8, 17, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. Claims 8, 17, and 19 do not contain ordered steps for the system or apparatus to implement a MOST method.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Sedlmeyer (US 5638451).

- In reference to claim 1

Sedlmeyer teaches a transmission system and method multi-channel audio-signals that includes:

Art Unit: 2662

- In Figure 1, a transmission apparatus for transmitting audio channels L, R, Z1, Z2, Z3, and auxiliary data CL, CR, CZ1, CZ2, CZ3
- In Figure 2, a receiving apparatus for receiving the audio channels L, R, Z1, Z2, Z3, and auxiliary data CL, CR, CZ1, CZ2, CZ3

- In reference to claim 5

Sedlmeyer teaches a system and method that covers substantially all limitations of the parent claim. In Figure 1, Sedlmeyer further teaches a multiplexer (7) to multiplex the audio channels L', R', Z1', Z2', Z3', and auxiliary data CL, CR, CZ1, CZ2, CZ3 into data stream M. In Figure 2, Sedlmeyer further teaches a demultiplexer (8) to demultiplex data stream M into the audio channels L', R', Z1', Z2', Z3', and auxiliary data CL, CR, CZ1, CZ2, CZ3.

7. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Otomo et al. (US6580671)

- In reference to claim 1

Otomo et al. teaches a transmission system that includes:

- In Figure 9A, a transmission apparatus for transmitting multi-channel audio (Figure 5) and auxiliary channel assignment data (Figure 8)
- In Figure 9B, a receiving apparatus for receiving multi-channel audio data (Figure 5) and the auxiliary channel assignment data (Figure 8)

- In reference to claim 2 and 3

Otomo et al. teaches a system and method that covers substantially all limitations of the parent claim. In Figure 29, Otomo et al. further teaches inserting sampling frequency and quantization bit information. (column 20 lines 10-18) (column 6 lines 41-48)

- In reference to claim 4

Otomo et al. teaches a system and method that covers substantially all limitations of the parent claim. Otomo et al. further teaches channel assignment information of the audio data is based on DVD-Audio standards. (abstract)

- In reference to claim 5

Otomo et al. teaches a system and method that covers substantially all limitations of the parent claim. In Figure 9A, Otomo et al. further teaches a multiplexer (17) for multiplexing the audio data and the auxiliary data into a packet to create multiplex data. (column 11 line 20-22) In Figure 9B, Otomo et al. further teaches a demultiplexer (21) for receiving the multiplexed data transmitted from the transmission apparatus and demultiplexing the audio and auxiliary data (column 11 lines 33-37).

- In reference to claim 6, as best understood

Otomo et al. teaches a system and method that covers substantially all limitations of the parent claim. In Figures 10-13, Otomo et al. further teaches

Art Unit: 2662

transmitting audio data having various sampling frequencies. The transmission apparatus of Figure 9 transmits audio data in the order that it is generated for each channel.

- In reference to claim 7

Otomo et al. teaches a system and method that covers substantially all limitations of the parent claim. In Figure 2 and 8, Otomo et al. further teaches time dividing the data into transmission frames and assigning a header (prescribed bits) to each transmission frame.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 8, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otomo et al. in view of the MOST specification.

- In reference to claim 8, as best understood

Otomo et al. teaches a system and method that covers substantially all limitations of the parent claim.

Otomo et al. does not teach transmitting the audio data and auxiliary data with a MOST method.

The MOST Specification teaches real-time synchronous audio/visual data MOST transmission method in applications involving consumer electronics, multimedia computers, home multimedia networks, and automotive multimedia networks. (pg 43-44 section 9.1-9.4; page 34 section 6.8.1)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Otomo et al. to include transmitting the audio data and the auxiliary data with a MOST method because the MOST method provides for audio and auxiliary data exchanging in low cost high speed multimedia peer to peer networks and for use in applications such as consumer electronics, multimedia computers, home multimedia networking and automotive multimedia networking.

- In reference to claim 18

In Figure 30, Otomo et al. teaches a transmission system that includes:

- A synchronization sensor (601) (first demultiplexer means) generates a timing signal from the received synchronization signal (column 21 lines 21-32)
- A decoder (613) for performing decoding in synchronization with the timing signal (column 21 lines 55-63)
- A demultiplexer (605) and control circuit (612) (second demultiplexer means) for demultiplexing the copyright protect information in the packet header in synchronization with the timing signal (column 21 lines 33-41)

- In reference 19, best understood

Otomo et al. teaches a system and method that covers substantially all limitations of the parent claim.

Otomo et al. does not teach transmitting the data according to a MOST method.

The MOST Specification teaches real-time synchronous audio/visual data MOST transmission method in applications involving consumer electronics, multimedia computers, home multimedia networks, and automotive multimedia networks. (pg 43-44 section 9.1-9.4; page 34 section 6.8.1)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Otomo et al. to include transmitting the audio data and the auxiliary data with a MOST method because the MOST method provides for transmitting the data via a low cost high speed multimedia peer to peer networks and for use in applications such as consumer electronics, multimedia computers, home multimedia networking and automotive multimedia networking.

10. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otomo et al. (US 6580671) in view of Lee et al. (US 6792532) and in view of the MOST specification.

- In reference to claim 16 and 17, as best understood

In Figure 30, Otomo et al. teaches a transmission system that includes:

- A first multiplexer means for adding copyright management information (column 23 lines 9-14)

Art Unit: 2662

- A second multiplexer means for adding a synchronization code to each frame (column 22 lines 50-65)
- Utilizing the data structure in transmitting data through a communication system (column 23 lines 46-49)

Otomo et al. does not explicitly teach an encryptor means for performing encryption.

Lee et al. teaches an encryption unit for encrypting data at a data transmission node.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Otomo et al. to include an encryption unit for encrypting data as taught by Lee et al. because it would prevent unauthorized users from accessing the data.

The combination Otomo et al. and Lee et al. teach a system and method that covers substantially all limitations of the parent claim.

The combination of Otomo et al. and Lee et al. do not explicitly teach the first multiplexer means, second multiplexer means, and encryptor means operating in synchronization with a periodic signal or transmitting the data according to a MOST method.

The MOST Specification teaches real-time synchronous audio/visual data MOST transmission method in applications involving consumer electronics, multimedia

computers, home multimedia networks, and automotive multimedia networks. (pg 43-44 section 9.1-9.4; page 34 section 6.8.1)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Otomo et al. and Lee et al. to include transmitting the data utilizing a MOST method where the first multiplexer means, second multiplexer means, and encryptor means operate in synchronization with the periodic signal of the synchronous channel because it would allow the encrypted audio data to be transported over the MOST synchronous channel in low cost high speed multimedia peer to peer networks and for use in applications such as consumer electronics, multimedia computers, home multimedia networking and automotive multimedia networking.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure are:

- Smyth et al. (US 5974380) teaches a multi-channel audio encoder.
- Heo et al. (US 5987417) teaches a DVD audio disk reproducing device and method.
- Komuro et al. (US 6223285) teaches a method and system for transferring information using an encryption mode indicator.


Art Unit: 2662

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Roberts whose telephone number is (571) 272-3095. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BSR
01/12/2006



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